METHODS FOR INCREASING EQUITY, DIVERSITY, AND INCLUSION IN LINGUISTICS PEDAGOGY[*]

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In this paper, we describe work we conducted over the first year of a three-year initiative to update how linguistics is taught in the Department of Linguistics at the University of Toronto to address some types of language-based biases that can arise in the linguistics classroom. We present this work in an effort to provide a model for instructors at other institutions and even in other fields, in the hope that they can draw inspiration from our methods in order to combat language-based biases in their own teaching. We begin in Section 1 with a discussion of some common language-based biases. In Section 2, we discuss the history, structure, and goals of our three-year initiative to address these biases. In Section 3, we go into depth into the five main components of our initiative. Finally, in Section 4, we explore some of the key lessons learned from the first year of this initiative.

1. Language-based biases

Linguists have come to a general consensus that all languages and all language varieties are valid, not just as objects of study within linguistics, but as ways of using language. That is, from the perspective of linguistics, they should have both scientific and social validity. However, as we are painfully aware, society does not take its cues from what linguists have to say, and many languages and language varieties are marginalized, disadvantaged, stigmatized, and oppressed in many different ways. We see this, for example, with various societal biases against non-standardized dialects, sign languages, minoritized languages, and Indigenous languages. Despite our general consensus about the validity of all language varieties, linguists are still a part of society, and we are shaped by many of these same biases, which we consequently perpetuate. Thus, as we work to change society's views on language, we need to remember to clean up own house, too.

1.1 External institutional pressures

Regardless of our own personal intentions or opinions, as instructors, we are often subject to higher authority that impacts our teaching. For example, we may have external institutional pressure to promote and evaluate student fluency in standardized academic English. This may surface as conformity to broader implicit community expectations, but it may even be explicit in institutional policies or learning goals. This disadvantages those students who do not have native fluency in a standardized variety of English, by introducing extra hurdles, barriers, and labour: they often have to take the time and expense of demonstrating English proficiency through official testing services; they may be required to take extra courses in English language learning and writing; they often have to spend more time visiting writing centres and working with language tutors; and they are more likely to have the content of their work marked down for linguistic reasons. These linguistically disadvantaged students are, not coincidentally, also disproportionately minoritized students, immigrants, students with learning differences, students from lower socioeconomic backgrounds, first generation university students, and various intersections of these, which means they already face many other disadvantages to their academic success.

1.2 Individual unconscious bias

Because we are constantly surrounded by these biases, we cannot help but be influenced by them, creating individual unconscious biases that can lead to us to commit common linguistic microaggressions, such as mispronouncing a racialized student's name (especially a student from another country) or using the wrong pronoun (misgendering) or a previous name (deadnaming) for a transgender or non-binary student. Names and gender lie at the heart of a person's identity, so these kinds of microaggressions can have severe detrimental effects on a student's mental health and academic success (Kohliand Solórzano 2012, Bucholtz 2016, Russell et al. 2018, Cochran 2019, McMaster 2020).

1.3 Bias endemic to the field of linguistics

These biases also permeate the conventionalized ways we practice and teach linguistics. For example, the data we use in publications and the classroom often reinforce unjust hierarchies and stereotypes, such as those concerning gender and culture (Macaulay and Brice 1997, Pabst et al. 2018, Richy and Burnett 2019, Kotek et al. 2020). We also often present spoken language as the default modality, leaving students with minimal understanding of sign languages, sign language linguistics, and Deaf culture and communities.

As linguists, we should know better, and we should do better. Our responsibility to address linguistic prejudices was recognized more than a century ago, with Ferdinand de Saussure's "la tâche du linguiste": "Quelle est enfin l'utilité de la linguistique ? [...I]l n'y a pas de domaine où aient germé plus d'idées absurdes, de préjugés, de mirages, de fictions. [...L]a tâche du linguiste est avant tout de les dénoncer, et de les dissiper aussi complètement que possible." ["Finally, what is the use of linguistics? There is no domain

in which more absurd ideas, prejudices, mirages, and fictions have arisen. The task of the linguist is, above all, to denounce and dispel them."] (Saussure 1916). Following in this spirit, as well as the spirit of many recent, more direct, calls to action for increased attention to issues of social justice in linguistics (such as Rickford and King 2016, Leonard 2018, Conrod 2019, and Charity Hudley 2020), we call upon linguists to combat language-based biases in their teaching. We single out teaching here specifically because that is where we begin training the next generation of linguists. No matter how aware we might be of our language-based biases, if we do nothing to challenge or disrupt them in our teaching, we will pass them on to our students, and the cycle will continue. In this paper, we describe an ongoing initiative in which we try to heed our own call to action on this issue and provide a model for others to do the same.

2.   Overview of our initiative

These kinds of issues have long been on the minds of linguists at the University of Toronto, with many already practicing socially-aware pedagogy in their own courses. Conversations eventually arose about how to expand and strengthen these individual efforts into a broader program across the department. In Fall 2018, Nathan Sanders worked with Keren Rice and Naomi Nagy, in consultation with members of the Language Variation and Change research group and the department at large, to write a grant for the Learning & Education Advancement Fund through the Faculty of Arts & Science, titled "Innovations in Linguistic Equity, Diversity, and Inclusion in the Linguistics Curriculum and Beyond".

     The grant was approved, and for three years beginning with the 2019–2020 academic year, funding has been available to pay for two full-time graduate student positions to work on the initiative, called Lead Equity, Diversity, and Inclusion Teaching Assistants, or Lead EDI TAs for short. The first two Lead EDI TAs to be hired were Pocholo Umbal and Lex Konnelly, who worked on the initiative throughout its first year and into the second.

     The initiative can be broken down into five main components, listed in (1) and more fully described in Section 3.

   (1)   a. raise explicit awareness of language-related bias in course content
          b. diversify data away from major standardized spoken European languages
          c. foster more inclusive and welcoming learning environments
          d. build a repository of resources and tools for instructors
          e. bring in guest speakers

In the first year, our primary strategy was to collaborate with instructors for two courses per semester to devise individualized approaches to goals (1a–c) that also suited their own instructional needs. For the second year, we plan to develop at least a rudimentary publicly accessible repository (1d) and also hold a series of invited guest speakers (1e), beginning in October 2020 with Professor Anne Charity Hudley of the University of California, Santa Barbara. We are also working on expanding the scope of the initiative beyond linguistics, with preliminary consultations with members of the Department of English.

3. Components of our initiative

3.1 Course content

For the Fall 2019 offering of LIN 228 (an introductory phonetics course taught by Nathan Sanders), we expanded three weeks of the course material to bring an explicit focus to language-based bias as content the students were expected to learn.

First, in a unit on modelling vowel acoustics, we added content concerning gender diversity to problematize the notion of "typical male/female" vocal tracts. Students are often taught to calculate resonant frequencies of the vocal tract using a default of 17.5 cm for the vocal tract length. In part, 17.5 cm is used for mathematical ease (the speed of sound is approximately 35,000 cm/s, which is easily divided by 17.5 cm). However, this length is also often claimed to be "typical" (as in Gobl and Ní Chasaide 2010: 380), "average" (Behrman 2018: 216) or "neutral" (whatever that means) (Howard and Angus 2017: 225) for adult males. This framing not only perpetuates male as a default (which is already a problem in the sciences), but it also ignores the range of body diversity within and across genders. See Appendix A for the prose regarding sex, gender, and the vocal tract that was added to the course lecture notes for that unit.

In a unit on auditory perception, we added content concerning the effect of social biases on speech perception. Speech perception is often taught very mechanically, with primary or sole focus on the physical functions of the auditory canal, the inner ear, the cochlea, etc. However, there is much research showing that social information also plays an important role in perception, so we cannot rely on auditory perception alone. For example, native speakers of Canadian English are perceived as less intelligible if they are Chinese and their faces are visible; the effect goes away for white speakers, or when Chinese faces are hidden (Babel and Russell 2015). This has many social impacts that students need to be aware of, for example, in how they may subconsciously rate racialized instructors worse than white instructors. See Appendix B for the prose regarding societal bias in speech perception that was added to the course lecture notes for that unit.

In a unit on sign language phonetics, we added content concerning how sign languages are often minimized or excluded in linguistics, with spoken languages treated as the assumed default: linguistics courses are regularly taught with no significant discussion of sign languages, and it is common for undergraduate linguistics students to only ever work with spoken language data. The reverse scenarios (linguistics courses that focus solely or exclusively on sign languages; students who never work with spoken language data) are highly marked. This feeds into larger societal biases in which sign languages and Deafness are ignored. See Appendix C for the prose regarding the role of sign languages in linguistics that was added to the course lecture notes for that unit.

3.2 Diversifying data

For the Fall 2019 offering of LIN 101 (the first half of a year-long introduction to linguistics, with a focus on phonetics and phonology, taught by Peter Jurgec), we worked on building

supplemental problem sets using data from languages that are not major standardized European languages. Some of the languages we worked with were Ainu, Cantonese, Faroese, Ganluo Ersu, Korean, Singapore English, Sundanese, Tagalog, Toronto Heritage Russian, and Turkana. See Appendices D and E for two sample problem sets we curated.

3.3 Inclusive classroom practices

We also organized workshops with instructors and teaching assistants for both LIN 101 and LIN 228 in Fall 2019 to discuss best practices for teaching a diverse student body. Our focus was two-fold. First, we aimed to raise awareness of general social respect for students, such as their gender, name, etc. But given that we are linguists, we also wanted to highlight how to respect a student's linguistic background, especially with an eye towards empowering students as language experts. Much of the workshop time was spent simply discussing these issues, making the teaching assistants aware of the kinds of issues to be on the lookout for in their own teaching, and brainstorming responses and solutions to potential problems that might arise. In the future, we would like to develop more codified materials, so these workshops can be run more widely across the department in a consistent way.

3.4 Repository

As we develop new lecture content, problem sets, and other materials, we are also looking at the best way to distribute them to a wider audience. Our ultimate goal is to have an online repository of these materials, ideally with some crowd-sourcing component to allow others to upload new materials and to rate, verify, and correct existing materials. In addition to the types of materials we have developed for specific courses, we are also working on building other databases to help linguists construct more diverse and inclusive example sentences. For example, we are in the midst of building a database of names that come from a variety of languages and cultures, categorized by gender (feminine, masculine, non-binary). See Appendix F for a sample of this database.

We also plan to build a database of predicates and sentence frames, categorized by argument structure and other relevant syntactic and semantic properties. Our goal is to select predicates and sentence frames that avoid the more problematic and offensive types that linguists often gravitate to: violence, gender and cultural stereotypes, etc.

3.5 Expert guest speakers

Beginning in the second year, we will invite guest speakers to address various aspects of social justice and its relationship to linguistics. Our first speaker is Professor Anne Charity Hudley from the University of California, Santa Barbara, who is scheduled to speak in October 2020. We are hoping to invites speakers from a diverse range of backgrounds and perspectives, both linguistic and social. We anticipate having two guest speakers per year in the second and third years of the initiative. We expect their ideas will help inform our initiative as it moves forward and create opportunities for collaboration.

4.   Concluding thoughts

After more than a year of working on this initiative, we have learned a number of important lessons than anyone taking on a project of this type should consider. First, time management and advanced preparation are key. Our first semester of the initiative went fairly smoothly, because we had had time before the semester began to brainstorm ideas and make an action plan. The second semester was somewhat more difficult. The time between semesters is very short and not optimal for doing any work, due to holidays, travel, family obligations, etc. Thus, it is crucial to start planning out the entire year during the summer, rather than trying to plan one semester at a time.

The nature of the course plays a significant role in the kind of work that can and should be done. Courses on sociolinguistics, field methods, language revitalization, etc. are already naturally predisposed to discussing issues of language-based biases, so those were not a high priority for us in the first year. We instead wanted to target courses in which these issues do not seem like a natural fit, in order to show that, in fact, they can be. Of these, phonetics and phonology seemed easiest to work with, in part because the datasets are generally easier to find and organize. Syntax was quite difficult. In Spring 2020, we worked with Susana Béjar for LIN 102 (the second half of a year-long introduction to linguistics, with a focus on syntax, semantics, and acquisition). It was difficult to find suitable datasets in a timely fashion that could be easily slotted into her materials.

Semantics was more difficult. In Spring 2020, we worked with Guillaume Thomas for LIN 241 (an introductory semantics course). We attempted to think more broadly about how semantics is taught, since the language of instruction (e.g. English) is also often used as the object language for analysis. This can be difficult for second-language learners, especially when it comes to subtle semantic and pragmatic distinctions that even native speakers struggle with. We began conversations that we expect to continue in how to rethink how semantics is taught.

Phonetics and phonology also happened to be easier because the three of us have more collective expertise in those fields than in syntax and semantics. This made it easier for us to judge how best to adapt our initiative to the relevant courses.

Obviously, this kind of work cannot succeed without instructor buy-in. We are grateful that Professors Jurgec, Béjar, and Thomas happily volunteered to participate. Without their commitment, the type of work we wanted to do in the first year would have been a lot more difficult. We are also fortunate that our department as a whole has been enthusiastic and supportive. Having an ambient culture that cares about social justice and values this kind of work had a huge impact on our motivation in carrying it out.

The most important reason this initiative has succeeded is because of the Lead EDI TAs' many hours of hard work, work that they could not have done, and should not be asked to do, without proper financial compensation. While availability of funding will vary, we encourage anyone interested in this type of work to be creative in looking for funding sources that are available at their institution. The grant we received was a teaching grant, which many research faculty are not even aware of.

To summarize, we have attempted to provide a model that we hope will inspire other linguists to answer our call to action to combat language-based biases in their teaching. As we have shown, there are many ways to address these issues: by adding new lecture content, cultivating new datasets, developing new methods and tools, and seeking out experts. Pick and choose what works for you.

We must offer a final caveat. We do not have all the answers. There are pieces of the puzzle we are certainly missing, and some that we are likely getting wrong. There are countless manifestations of bias and countless valid solutions. No one group or individual can do this kind of work perfectly. Social justice is a communal effort, and we must all contribute and support each other.

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Appendix A: Sex, gender, and the vocal tract

Sex is a collection of biological characteristics (such as reproductive anatomy, chromosomes, gene expression, etc.), that are usually divided up into two categories for humans: male and female. However, sexes are more complex than this simple binary division, since males and females do not always neatly separate in the space of biological properties. For example, not all members of a sex share all biological characteristics, and in fact, anyone can have a mixture of characteristics from different sexes, to varying degrees (someone whose sex characteristics are sufficiently mixed may be called **intersex**).

A related concept is **gender**, which is how people perceive themselves in relation to various socially constructed roles and traits linked to sex. Gender is often assigned at birth based on sex, but the relationship between sex and gender is not universal or consistent. Someone whose gender corresponds to their assigned gender is called **cisgender**, while someone whose gender does not correspond to their assigned gender is called **transgender**. For example, a woman who was assigned female at birth is a cisgender woman, while a woman assigned male at birth is a transgender woman. Someone whose gender falls outside the traditional man/woman binary is often called **non-binary**. Note that there is some variation in terminology, and the socio-political connotations of these terms and concepts are quite complex and often controversial, so there is necessary simplification here. When discussing a particular person's gender, it is best to ask them what terminology they prefer.

The reason sex and gender matter for our current purposes is that we have taken 17.5 cm to be a reasonable value for the human vocal tract length. Though this is framed as a way to make resonant frequencies easier to calculate, use of this value is somewhat problematic, both historically and empirically, so extra thought and discussion are warranted. To begin with, male physiology is often treated as the default in science and society generally, and our default of 17.5 cm is often presented as a "male" vocal tract length, which perpetuates the implication that male itself is the default (and thus, "normal") and that everything else is a deviation from the default (and thus, "abnormal").

Furthermore, identifying 17.5 cm specifically as a "male" vocal tract length (and a shorter length as "female") treats *male* and *female* as homogenous categories and implicitly assumes that these categories are representative of men and women in general. However, not only does this collapse and ignore a significant amount of human sexual variation within these categories, but it also excludes bodies and identities that fall outside of these categories. Males and females are much more diverse than their averages, and sex and gender are much more diverse than these binary distinctions.

Much of the human sexual variation at issue in determining average vocal tract lengths relates to overgeneralizations about physiology and biology. Because formant frequencies are different for different vocal tract lengths, with lower formants in longer vocal tracts, many linguists have proposed that individuals with larger bodies (generally assumed to be men) will consequently have lower vowel formants. However, body size does not correlate perfectly with sex or gender, and formants can differ as much within these groups as between them.

Sex and gender not only have a complex relationship with vocal tract length and formant values, but also with the fundamental frequency of vocal cord vibration. The rate of vibration partly depends on the mass of the vocal folds: larger vocal folds produce slower vibration, resulting in a lower F0 (and thus, a deeper voice), while smaller vocal folds produce a faster vibration, resulting in a higher F0.

Cross-sex differences in male and female F0 typically arise during puberty, when the greatly increased testosterone production that characterizes male puberty causes a lowering and lengthening of the larynx and a thickening of the vocal folds, increasing the overall mass and thus lowering F0. Hormones are therefore an important contributing factor in delimiting a speaker's F0 range. While cisgender men typically experience this lowering during puberty, transgender individuals who take testosterone-based **hormone replacement therapy (HRT)** will undergo a similar thickening of the vocal folds regardless of their life stage. However, while testosterone HRT thickens the vocal folds, it does not lead to any other changes to the vocal tract; an individual on testosterone will therefore experience a lowering of their F0, but their resonant frequencies will not be affected. Estrogen-based HRT, on the other hand, does not lead to any physiological changes to the vocal tract. For this reason, many transgender individuals who take estrogen pursue speech therapy to train their voices to more closely align with their gender identities. They may also work to re-learn their intonation patterns, volume, speech rate, and articulation, all qualities that have their own gendered associations. Speech therapy is also an option for individuals on testosterone, but due to the characteristic thickening of the vocal folds from the hormone, many such speakers choose not to pursue it.

Of increasing importance in (socio)phonetic research is the recognition of gender diversity that has not historically been acknowledged in the field until more recently. Recent accounts of the relationship between sex, gender, and the vocal tract have shown that speakers' alignment with certain gendered phonetic styles can vary across time, culture, language, and social group, which is strong evidence for the influence of sociocultural norms even where biology and physiology are clearly also at play. This may be especially true for transgender speakers. Importantly, because what is considered to be a "feminine" or a "masculine" voice varies depending on cultural norms, and it is crucial that acoustic studies also include support for the socially-grounded explanations for sex and gender differentiations in the voice.

In short, determining phonetic correlates based on averages of human physiology and sex or gender presents some challenges and does not account for substantial sexual and gender diversity. While biological factors may present some limits on the frequencies a speaker is able to produce, it is by no means fixed and may be subject to change across the lifespan.

Consult the following sources for more information on gender diversity and the vocal tract: Cler et al. (2020); Davies et al. (2015); Murray (2016); Zimman (2018). Note that transgender speakers on estrogen and transgender speakers who do not pursue any hormone therapy at all are underrepresented in the linguistic literature. One exception is in the speech language pathology literature, where transgender women on estrogen are overrepresented.

Appendix B: Social information and biases in speech perception

The speech signal not only carries information about what is being said, but also about the speaker's identity: their gender, age, sexual orientation, ethnicity, etc. (Foulkes 2010). Listeners, in turn, make use of this information, so their perception of the speech signal is complicated by factors beyond those discussed so far. Our brain also accesses our previous experiences, social knowledge, stereotypes, expectations, and other kinds of nonlinguistic information.

For example, when presented with sounds that lie on a continuum between /ʃ/ and /s/, listeners identify more /ʃ/ than /s/ when they are led to believe the voice comes from a woman (Munson et al. 2006). American English listeners are also more likely to perceive the sequence [mæs] as *mass* when they are shown a picture of a white person but as *mast* when they are shown a Black person (Staum Casasanto 2008). Findings like these suggest that when listeners are primed about the identity of the speaker, they make use of sociolinguistic knowledge about how different groups speak (e.g. African American English has higher rates of deletion of word-final alveolar oral stops in words like *mast*).

While often beneficial from an efficiency standpoint, the role of this kind of social information in speech perception can also have negative effects. **Reverse linguistic stereotyping** occurs when perceived group membership affects speech perception to the point of causing willful misunderstanding and negative judgments of the speech signal (Kang and Rubin 2009). For example, native speakers of Canadian English are perceived as less accented and more intelligible when their voice is presented with their faces if they are white, but as more accented and less intelligible when they are Chinese; when the faces are not shown, there is no difference between groups (Babel and Russell 2015). This judgment typically stems from prior biases (Rubin 1992), and listeners may thus choose to exert less effort or energy into decoding the acoustic signal (Lippi-Green 2012). Because we constantly use these biases to analyze and interpret incoming speech, it is important to be mindful of how we evaluate someone else's speech, especially in forming judgements about intelligibility or accentedness.

Appendix C: The status of sign languages in linguistics

Although sign languages have been taught in schools since the late 18th century, they have long been popularly believed to be less complex than spoken languages, lacking their systematic linguistic structure and expressive power. This belief was so prevalent that even linguists did not use their methods to rigorously analyze sign languages until the work of **William Stokoe** (pronounced [ˈstoki]). In 1960, Stokoe demonstrated that sign languages have the same linguistic complexity and structures that spoken languages do and that they satisfy any reasonable definition of *language*.

Since then, much work has been done on sign languages, though spoken languages are still the assumed default in linguistics. For example, while linguistics courses across the world are regularly taught with little discussion of sign languages, analogous courses

that do not spend significant time on spoken languages are rare, and where they do exist, they are usually overtly marked as "sign language phonetics", etc. It is quite common for an undergraduate linguistics major to never even work with any sign language data at all, even for a single problem set, but the reverse, never working with any spoken language data, would be viewed as highly improper.

This asymmetric attitude in the field is problematic for multiple reasons. First, it treats sign languages and Deafness as atypical phenomena that can be minimized or even outright ignored. In addition, this attitude misses out on a huge amount of relevant knowledge, but this is typically not seen as important: it is quite common for linguists to make broad proclamations about how language works, without having ever checked to see what sign languages do. This attitude is slowly changing (as it is for Indigenous languages), one linguist at a time, but progress has been slow.

Appendix D: Sundanese plurals

Sudanese is an Austronesian language spoken by about 40 million people on Java, Indonesia. Consider how the plural differs from the singular in the data below, and answer the questions that follow. The data has been simplified for clarity.

| 'SG'	'PL'		'SG'	'PL'	
kusut	karusut	'messy'	hormat	halormat	'respect'
damaŋ	daramaŋ	'well (adj)'	lɨtik	lalɨtik	'little'
poho	paroho	'forget'	ləga	laləga	'wide'
dahar	dalahar	'eat'	bɨŋhar	balɨŋhar	'rich'

1. What type of affix marks the plural?
2. What are the allomorphs of the plural?
3. What are the two environments in which the allomorphs appear? Hint: one depends on material on the left, and the other depends on material to the right.

Appendix E: VOT in Toronto Heritage Russian

In Canada, heritage languages are defined as languages that are neither of Canada's official languages (English or French) nor an Indigenous language of Canada. They are spoken by immigrants and their descendants. Heritage language grammar may vary from its homeland counterpart due to a number of linguistic and social factors. In Toronto, heritage languages are in constant contact with English, the majority language spoken throughout the city. Therefore, it is possible that English grammar influences heritage language grammar.

Toronto Heritage Russian shows variation with respect to voice onset time (VOT) for the voiceless stops /k,p,t/ (VOT is the time that passes between the release of the stop and the onset of voicing in the following vowel). Russian stops normally have a short VOT (shorter than 30 msec), while English stops have a long VOT (longer than 30 msec). A long VOT is also referred to as aspiration.

Figure 1 (adapted from Nagy and Kochetov 2013; values are approximate) shows data for VOT for the consonants /k,p,t/ in stressed, word-initial positions, across three genera-tions of Toronto Heritage Russian (with Generation 1 being immigrants who grew up in the homeland, Generation 2 being the children of Generation 1, and Generation 3 being the children of Generation 2). The dashed horizontal lines represent the average VOT standards in Canadian English and homeland Russian.
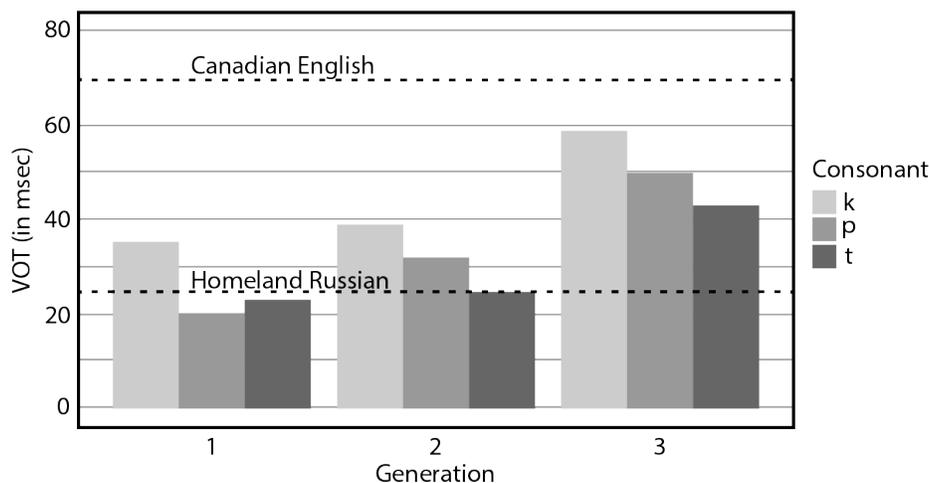
Figure 1. Toronto Heritage Russian VOT across three generations.

1. Does Toronto Heritage Russian show influence of English? How do you know?
2. If so, which generation shows the greatest influence of English?
3. What would you expect to happen to VOT measures among Generation 4 speakers?

Appendix F: Diverse Names Database

Table 1 shows entries from the Diverse Names Database. Here, "F" and "M" indicate names that are strongly identified with one side or other of a binary gender distinction between female and male by native speakers of the language of origin, while "NB" indicates names that are not restricted to this gender binary and can be used for all genders.

Table 1. Sample entries from the Diverse Names Database.

F	M	NB	language of origin
Anuhea	Akoni	Akela	Hawaiian (Austronesian)
Bayarmaa	Batzorig	Batu	Mongolian (Mongolic)
Chana	Chayim	Chesed	Hebrew (Afro-Asiatic)
Damla	Demir	Deniz	Turkish (Turkic)
Eirian	Elwyn	Eryl	Welsh (Indo-European)
⋮	⋮	⋮	⋮
Zuriñe	Zuzen	Zorion	Basque (isolate)